

DISCUSSION OF THE AMENDMENT

Claims 1-24 are active in the present application. Independent Claim 1 is amended for matters of form and for clarity. The amendment to Claim 1 is not intended to further limit the claimed subject matter. Claims 23 and 24 are new claims. Support for the new claims is found in paragraph [0108] of the PG publication corresponding to the present application (U.S. 2006/0063011).

No new matter is added.

REMARKS

Independent Claim 1 of the present application includes a product-by-process limitation; namely, an “adhesion-promoting intermediate layer...obtained by applying the intermediate layer (b) from a mixture with a solvent that has a volatility index smaller than or equal to 20...”. Applicants submit that the prior art relied on by the Office does not disclose or suggest, *inter alia*, this feature of the presently claimed invention. With respect to the volatility index, the original specification provides a definition of this term and a means for its measurement (see paragraph [0107] of the PG publication - U.S. 2006/0063011).

The present application describes the influence of the product-by-process limitation in the inventive and comparative examples of the specification. Inventive Example 1 disclosed in paragraphs [0174]-[0181] of the PG publication describes the preparation of a formable plastic article that adheres to the present claim limitations. The formable plastic article of Example 1 is made by depositing a mixture of methyl methacrylate and gamma-methacryloyl oxypropyltrimethoxysilane in butyl acetate onto a plastic substrate. The finished plastic article of Inventive Example 1 was subjected to thermoforming at a temperature of 150-170°C (see paragraph [0179] of the PG publication). No haze or cracks were found in the resulting coating and the resulting coating was effective at inhibiting water droplet formation with low contact angles.

Comparative Example 1 described in paragraphs [0182]-[0184] is substantially the same as Inventive Example 1 however the adhesion-promoting intermediate layer was applied as a solution in 1-methoxy-2-propanol. The volatility index of this solvent is 22. As already noted above, independent Claim 1 requires that the volatility index of the solvent in which the intermediate layer precursor is dissolved is no greater than 20. In contrast to the formable plastic article made in Inventive Example 1, the formable plastic article of

Comparative Example 1 shows that, after thermoforming, severe haze is observed and water droplet formation was poor (see paragraph [0184] of the PG publication).

Applicants have thus demonstrated the criticality of the product-by-process limitation of the present claims. If the components of the intermediate layer are applied onto the substrate as a solution in a solvent that has a volatility index that is greater than 20, the resulting formable plastic article will be susceptible to the formation of haze and/or cracks during thermoforming. It is readily recognizable that the formation of haze and/or cracks in a thermoformable plastic article is undesirable, especially in situations where the plastic is transparent such as for greenhouse panes and/or ophthalmic applications.

Applicants submit that the rejection of the present claims as obvious over the combination of Krautter (US 4,576,864) and Faverolle (US 6,503,631) is not supportable at least because the Faverolle and Krautter publications, alone or together, do not disclose all of the present claim limitations. In particular, the prior art relied on by the Office does not disclose a requirement that any intermediate layer is applied as a mixture with a solvent having a volatility index of less than 20. Applicants thus submit that the rejection is not supportable and should be withdrawn.

The original specification distinguishes certain formable plastic articles described in the present application from articles disclosed in Krautter. The paragraphs bridging pages 1 and 2 are reproduced below for convenience:

EP-A-0149182 also discloses articles which inhibit water droplet formation. These plastics articles comprise an inorganic coating based on SiO₂. However, a disadvantage of the plastics articles which inhibit water droplet formation and are disclosed in EP-A-0149182 is that this type of plastics article completely loses its property of inhibiting water droplet formation when it is thermoformed, while the coating on the formed article takes on a milky haze and becomes unsightly.

Applicants have thus distinguished the presently claimed invention from Krautter on the basis that Krautter is different with respect to its ability to inhibit water droplet formation and maintain other desirable properties upon thermoforming.

Applicants draw the Office's attention to new dependent Claims 23 and 24. New dependent claim 23 recites a Markush group of particular solvents that must be used in the claimed formable plastic article. At best, Krautter discloses applying a solution of aqueous silicic material to a substrate. The aqueous silicic material of the examples of Krautter (see Example 1 in columns 10 and 11 of Krautter) cannot render the present claims obvious because water has a volatility index of much greater than 20, i.e., water is much less volatile than 1-methoxy-2-propanol.

For the reasons discussed above in detail, Applicants submit that all now-pending claims are patentable over the cited prior art. Applicants request withdrawal of the rejections and the allowance of all now-pending claims.

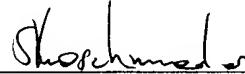
With respect to the obviousness-type double patenting rejection over Claims 1-23 of co-pending application 10/538,887, Applicants note that the claims of the '887 application do not recite the product-by-process limitation of the present claims and further require a certain water contact angle. As already noted above, Applicants have demonstrated the criticality of the product-by-process limitation recited in the present claims. Applicants submit that the evidence of the original specification proves that the presently claimed invention is different from generic plastic articles and therefore the obviousness-type double patenting rejection should be withdrawn.

Applicants reserve the right to file a Terminal Disclaimer to expedite prosecution later, if desired.

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants request withdrawal of the rejection and the allowance of all now-pending claims.

Respectfully submitted,

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